

**ABSTRACT OF DISCLOSURE**

The present invention is a system that allows a number of 3D volumetric display or output configurations, such as dome, cubical and cylindrical volumetric displays, to interact with a number of different input configurations, such as a three-dimensional position sensing system having a volume sensing field, a planar position sensing system having a digitizing tablet, and a non-planar position sensing system having a sensing grid formed on a dome. The user interacts via the input configurations, such as by moving a digitizing stylus on the sensing grid formed on the dome enclosure surface. This interaction affects the content of the volumetric display by mapping positions and corresponding vectors of the stylus to a moving cursor within the 3D display space of the volumetric display that is offset from a tip of the stylus along the vector.